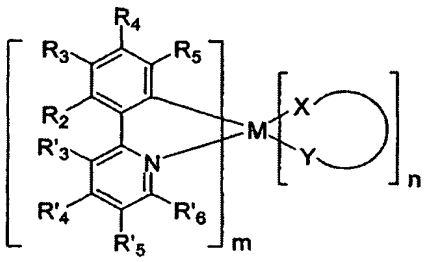
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in this application.

Listing of Claims:

1. (currently amended) An emissive material represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R_3 is a substituent having a Hammett value ~~less than about -0.17, between about -0.15 and 0.05, or~~ greater than about ~~0.07~~ 0.6;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, ~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,

is a monoanionic non carbon coordinating~~coordinatingcoordinated~~ ligand.

2. (currently amended) The ~~composition~~ emissive material of claim 1 wherein R_4 is H.

3. (canceled)

4. (currently amended) The ~~composition~~ emissive material of claim 1 wherein ~~R_3 and~~ R_5 ~~are both~~ is an electron withdrawing group[[s]].

5. (canceled)

6. (currently amended) The ~~composition~~ emissive material of claim 1 wherein at least one of R_2 and R_4 is an electron withdrawing group.

7. (currently amended) The ~~composition~~ emissive material of claim 4 wherein at least one of R_2 and R_4 is an electron withdrawing group.

8. (currently amended) The ~~composition~~ emissive material of claim 1 wherein ~~the~~ at least one substituent of the emmisive material is an electron withdrawing group~~s are~~ selected from halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, ~~C CR~~ C≡CR, and aryl ~~or~~ and heteroaryl groups substituted with halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R , where R is a hydrogen, alkyl, aryl or heteroaryl group

9. (currently amended) The ~~composition~~ emissive material of claim 1 wherein ~~at least one of R_3 and~~ R_5 is an electron donating group.

10. (canceled)

11. (canceled)

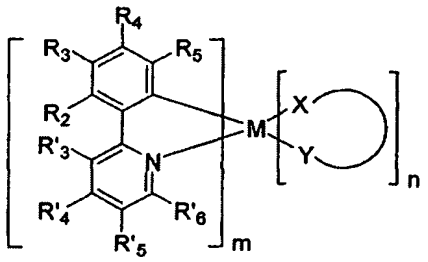
12. (currently amended) The ~~composition~~ emissive material of claim 1 wherein ~~the~~ at least one substituent of the emmisive material is an electron donating group~~s are~~ selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

13. (currently amended) The ~~composition~~ emissive material of claim 1 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

14. (currently amended) The ~~composition~~ emissive material of claim 1 wherein the metal is iridium.

15. (currently amended) The ~~composition~~ emissive material of claim 1 wherein the metal is platinum.

16. (currently amended) A composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

at least one of R_3 and R_5 is CN ~~a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07~~;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, ~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3;

is a ~~non carbon coordinated~~ monoanionic non carbon coordinating ligand; and,

wherein ~~R'_4 is an electron withdrawing group or an electron donating group such that if neither R_3 nor R_5 is an electron withdrawing group then R'_4 is an electron withdrawing group and~~ if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.

17. (original) The composition of claim 16, wherein neither R_3 nor R_5 is an electron donating group and wherein R'_4 is an electron donating group.

18. (canceled)

19. (currently amended) The composition of claim 16, wherein ~~at least one of R_3 nor R_5 is an electron withdrawing group and~~ R'_4 is an electron donating group.

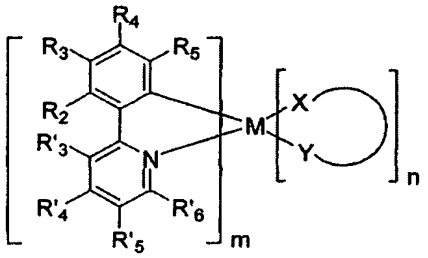
20. (currently amended) The composition of claim 16, wherein ~~at least~~ one of R_3 ~~nor~~ and R_5 is an electron donating group, and R'_4 is an electron withdrawing group.

21. (currently amended) The composition of claim 16 wherein ~~the~~ at least one substituent of the composition is an electron withdrawing group~~s are~~ selected from halogens, CN, ~~CF_3~~, ~~C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, or C≡CR, and aryl ~~or~~ and heteroaryl groups substituted with halogens, CN, ~~CF_3~~, ~~C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R , where R is a hydrogen, alkyl, aryl or heteroaryl group.

22. (currently amended) The composition of claim 16 wherein ~~the~~ at least one substituent of the composition is an electron donating group~~s are~~ selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

23. (original) The composition of claim 16 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

24. (currently amended) A composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

~~R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05,, or greater than about 0.07~~;

each of R_2 through R_5 and R'_3 through R_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl,

~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

at least one of R_3 and R_5 is CN, and, where only one of R_3 and R_5 is CN, the other is ~~being~~ selected from the group consisting of ~~CN~~ H, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, and aryl ~~or~~ and heteroaryl groups substituted with halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, or C≡CR, where R is a hydrogen, alkyl, aryl or heteroaryl group, wherein m is an integer between 1 and 4 and n is an integer between 1 and 3 and X-Y is non carbon coordinating monoanionic ligand .

25. (canceled)

26. (original) The composition of claim 25 wherein at least one of R_2 and R_4 is F.

27. (original) The composition of claim 26 wherein R'_4 is an electron donating group.

28. (original) The composition of claim 26 wherein R'_4 is NMe_2.

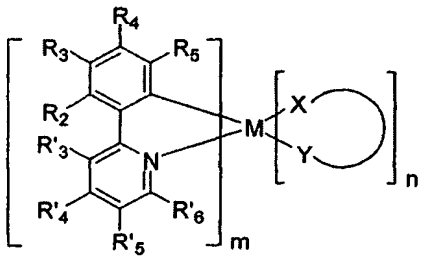
29. (currently amended) The composition of claim 24 wherein ~~at least~~ one of R_3 and R_5 is CF_3

30. (original) The composition of claim 29 wherein at least one of R_2 and R_4 is F.

31. (original) The composition of claim 29 wherein R'_4 is an electron donating group.

32. (original) The composition of claim 29 wherein R'_4 is NMe_2.

33. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

at least one of R_3 and R_5 is CN ~~a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07~~;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, ~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

~~at least~~ one of R_3 and R_5 is optionally ~~either an electron withdrawing group or~~ an electron donating group;

m is an integer between 1 and 4 and n is an integer between 1 and 3: and

is a monoanionic non carbon coordinating ligand.

34. (canceled)

35. (original) The light emitting device of claim 33 wherein R_3 and R_5 are both electron withdrawing groups.

36. (original) The light emitting device of claim 33 wherein R_3 is an electron withdrawing group.

37. (original) The light emitting device of claim 33 wherein R_2 and R_4 are electron withdrawing groups.

38. (original) The light emitting device of claim 33 wherein R_2 and R_4 are electron withdrawing groups.

39. (currently amended) The light emitting device of claim 33 wherein ~~at least~~ one of R_3 and R_5 is an electron donating group.

40. (canceled)

41. (currently amended) The light emitting device of claim 33 wherein ~~the~~ at least one substituent of the emmisive material is an electron donating group~~s are~~ selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

42. (original) The light emitting device of claim 33 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

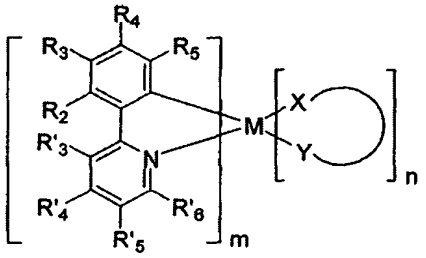
43. (original) The light emitting device of claim 33 wherein the metal is Pt.

44. (original) The light emitting device of claim 33 wherein the metal is Ir.

45. (original) The light emitting device of claim 33 wherein light emitted by the organic layer has a maximum wavelength of less than 520 nm

46. (original) The light emitting device of claim 33 wherein light emitted by the organic layer has a wavelength of between approximately 420 nm and approximately 480 nm.

47. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

at least one of R_3 and R_5 is CN ~~a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07~~;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, ~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-

amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

at ~~least~~ one of R_3 and R_5 is ~~either an electron withdrawing group or~~ optionally an electron donating group;

m is an integer between 1 and 4 and n is an integer between 1 and 3;


is a monoanionic non carbon coordinated ligand; and,

wherein ~~R'_4 is an electron withdrawing group or an electron donating group such that if neither R_3 nor R_5 is an electron withdrawing group then R'_4 is an electron withdrawing group and~~ if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.

48. (currently amended) The light emitting device of claim 47, wherein ~~at least one of R_3 and R_5 is an electron withdrawing group and~~ R'_4 is an electron donating group.

49. (currently amended) The light emitting device of claim 47, wherein both R_3 and R_5 are electron withdrawing groups and R'_4 is an electron donating group.

50. (currently amended) The light emitting device of claim 47, wherein ~~at least~~ one of R_3 and R_5 is an electron donating group and R'_4 is an electron withdrawing group.

51. (currently amended) The light emitting device of claim 47, wherein ~~R_3 and R_5 are electron donating groups and~~ R'_4 is an electron withdrawing group.

52. (currently amended) The light emitting device of claim 47 wherein ~~the~~ at least one substituent of the composition is an electron withdrawing group~~s are~~ selected from halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, and aryl ~~or~~ and heteroaryl groups substituted with halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

53. (currently amended) The light emitting device of claim 47 wherein ~~the~~ at least one substituent of the composition is an electron donating group~~s are~~ selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

54. (original) The light emitting device of claim 47 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

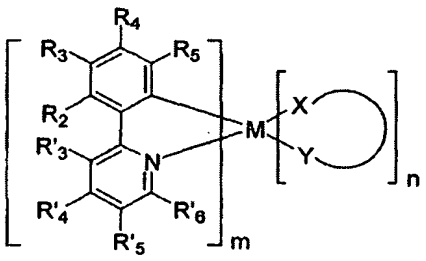
55. (original) The light emitting device of claim 47 wherein the metal is Pt.

56. (original) The light emitting device of claim 47 wherein the metal is Ir.

57. (original) The light emitting device of claim 47, wherein light emitted by the organic layer has a maximum wavelength of less than 520nm.

58. (original) The light emitting device of claim 47 wherein light emitted by the organic layer has a wavelength of between approximately 420 nm and approximately 480 nm.

59. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

~~R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07~~;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, ~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,

 is a monoanionic non carbon coordinating ligand[[.]];

at least one of R_3 and R_5 is CN, and where only one of R_3 and R_5 is CN, the other is ~~being~~ selected from the group consisting of ~~CN~~ H, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, and aryl ~~or~~ and heteroaryl groups substituted with halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

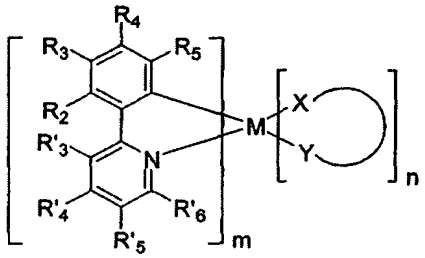
60. (canceled)

61. (currently amended) The light emitting device of claim 60 wherein ~~at least one of R_3 and R_5 is CN, and~~ at least one of R_2 and R_4 is F.

62. (currently amended) The light emitting device of claim 60 wherein ~~at least~~ one of R_3 and R_5 is CF_3.

63. (currently amended) The light emitting device of claim 60 wherein ~~at least~~ one of R_3 and R_5 is CF_3, and at least one of R_2 and R_4 is F.

64. (currently amended) A composition represented by the following structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

at least one of R_3 and R_5 is CN ~~a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07~~;

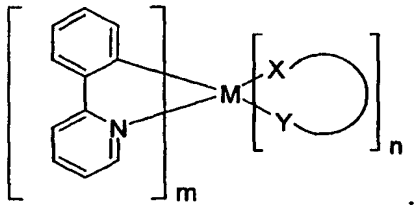
each of R_2 through R_4 and R'_3 through R_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl,

~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,

is a monoanionic non carbon coordinating ligand,

wherein R_3 and R_5 are selected to provide a hypsochromic shift in the emission spectrum of the compound of greater than or equal to approximately 40 nm as compared with the emission spectrum of a composition with the following structure:

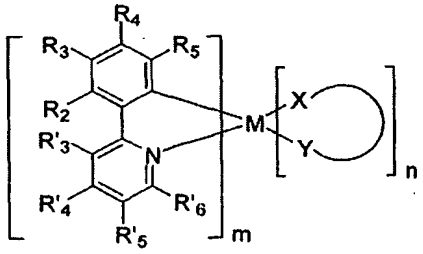


65. (canceled)

66. (canceled)

67. (canceled)

68. An emissive material represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40; m is at least 1 n is at least 0

X —Y is an ancillary ligand;

R_2 and R_4 are both F;

at least one of R_3 and R_5 is CN ~~a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07~~;

each of R_3, R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, ~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group

69. (canceled)

70. (original) The emissive material of claim 68 wherein R_3 and R_5 are both electron withdrawing groups.

71. (original) The emissive material of claim 68 wherein R_3 is an electron withdrawing group.

72. (currently amended) The emissive material of claim 68 wherein ~~the~~ at least one substituent of the emmisive material is an electron withdrawing group~~s are~~ selected from halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, ~~C-CR~~ C≡CR, and aryl ~~or~~ and heteroaryl groups substituted with halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

73. (currently amended) The emissive material of claim 68 wherein ~~at least~~ one of R_3 and R_5 is an electron donating group.

74. (canceled)

75. (original) The emissive material of claim 68 wherein R_3 is an electron donating group.

76. (currently amended) The emissive material of claim 68 wherein ~~the~~ at least one substituent of the emmisive material is an electron donating group~~s are~~ selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

77. (original) The emissive material of claim 68 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

78. (original) The emissive material of claim 68 wherein the metal is iridium.

79. (original) The emissive material of claim 68 wherein the metal is platinum.

80. (currently amended) The composition of claim 68 wherein ~~R'_4 is an electron withdrawing group or an electron donating group such that if neither R'_3 nor R'_5 is an electron withdrawing group then R'_4 is an electron withdrawing group and~~ if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.

81. (canceled)

82. (currently amended) The emissive material of claim 80 wherein ~~neither R_3 nor R_5 is an electron withdrawing group and wherein~~ R'_4 is an electron withdrawing group.

83. (canceled)

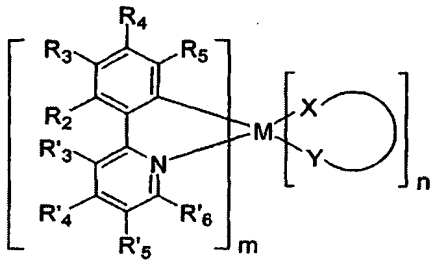
84. (currently amended) The emissive material of claim 80 wherein ~~at least~~ one of R_3 ~~nor~~ and R_5 is an electron donating group, and R'_4 is an electron withdrawing group.

85. (currently amended) The emissive material of claim 80 wherein ~~the~~ at least one substituent of the emmisive material is an electron withdrawing group~~s are~~ selected from halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, and halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

86. (currently amended) The emissive material of claim 80 wherein ~~the~~ at least one substituent of the emmisive material is an electron donating group~~s are~~ selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

87. (original) The emissive material of claim 80 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

88. (currently amended) A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the general structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40; m is at least 1 n is at least 0

X –Y is an ancillary ligand;

R_2 and R_4 are both F;

at least one of R_3 and R_5 is CN ~~a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07~~;

each of R_3, R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, ~~CF_3, C_nF_{2n+1}~~ perfluoralkyl, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, ~~C-CR~~ C≡CR, alkyl, alkenyl, aryl, heteroaryl, ~~aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R,~~ OR, SR, NR_2 (including cyclic-amino), and PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group

89. (canceled)

90. (currently amended) The light emitting device of claim 88 wherein R'4 is an electron withdrawing group or an electron donating group such that if neither R_3 nor R_5 is an electron withdrawing group then R'_4 is an electron withdrawing group and if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.